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BEACON
ARITHMETIC
BOOK ONE · PART ONE

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BEACON
ARITHMETIC

BOOK ONE   PART ONE

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Foreword

THE Beacon Arithmetic Series is an outcome of the author's experience that if boys and girls are allowed access to the right kind of arithmetic, presented in the right way, the satisfaction of success will follow.

The books are addressed directly to the pupil so that, with a minimum of oral instruction, a large amount of practice material is available. Their contents are so selected as to give approximately equal practice in all the items of the basic tables and in each step of the essential processes in computation, problem-solving and measurement. Frequent and varied use of the Question-Answer Cards, as suggested in the Teacher's Book, is an essential part of this practice.

Pupils differ in rate of learning, in freshness of attention, in health and in regularity of attendance. Their difficulties likewise vary, and the determination of their arithmetical needs is as important to the teacher as is diagnosis of their physical ailments to a doctor. Such diagnosis of weaknesses is facilitated by the arrangement of the material in chapters, at the end of each of which are five tests — three in the Pupil's Book, under the titles *A page to climb on*, *Pupils' own test*, *A page to race on*, and two additional tests in the Teacher's Book. These tests are so organised that from the position of errors the necessary remedial practice may be rapidly ascertained and prescribed.

The content of each lesson is indicated clearly, and each chapter with revision, diagnostic tests, and remedial suggestions (see Teacher's Book) is complete in itself. The chapters may, therefore, be taken in any order which fits

the requirements of a local scheme of work. This arrangement also facilitates the use of the books whether pupils work individually or in groups.

The first part of Book One contains revision of the additions and subtractions which are commonly taught in the Infant School. Such revision is not a waste of time but provides a means of consolidating what has been learnt and of increasing speed and certainty in the use of these fundamental processes. It is suggested that the interest of the pupils be directed towards improving on their own records from day to day and that attention be drawn to the usefulness of rapidity as well as accuracy.

It is a common difficulty in the early stages of arithmetic teaching that whereas pupils can " do the number work " their reading experience is such that they cannot use their number ability in even the simplest of problems — a confession that they have neither met the language of arithmetic nor had adequate practice in reading for exact meaning. Teachers will find that many of these early reading difficulties will not arise with pupils who, before they begin the books in this series, have read, worked through and enjoyed the Number Reader which has been designed to precede it.

Alone among books used in schools, the arithmetic book has often been allowed to violate accepted recommendations as to the size of type suitable for children of differing ages. Small and closely packed type may hinder the child's progress in reading arithmetic, and handicap him in problem-solving which is, in the last analysis, the real evidence of his growing numerical ability. The large type and openly spaced pages in the Beacon Arithmetic Series will, it is hoped, invite the child to read with enjoyment and confidence.

Contents

Money
  Pages 23, 59, 60, 82, 83, 105, 106, 125, 126.
Tests
  Pages 24, 25, 46, 47, 65, 66, 91, 92, 118, 120, 127. Additional forms of these Tests are included in the Teacher's Book, along with suggestions for games, projects, and oral problems.
Speed Drill
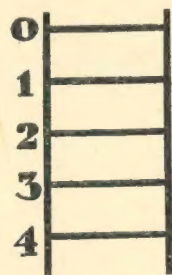 Pages 26, 48, 69, 95, 121, 127.

TO EACH BOY OR GIRL

This book is made for you.

On some pages you will see the words :

A page to climb on

When you come to one of these pages, draw a picture of a ladder in your notebook, like this :

When you have finished your work on the page, count the sums in which you were wrong.

If you have no sums wrong, draw a little man on the top step of the ladder. Put him on the step marked 1 if you have one sum wrong, and so on. Try to keep him as high as you can.

On some pages you will see the words :

A page to race on

On these pages see how many sums you can do in three minutes. Use a sand-glass, if you have one, to tell you when to stop.

Chapter I   Adding

These boys and girls live in Beacon Street.

Nine of them are so big that they go to school, but one of them is too small.

In this book you will read about some of the games they play and the work they do.

Jessie is counting to find out how many are ready to play at ball.   Can you find her?

Tom asked Jessie how she could count so fast.

" It takes me a long time," he said, " to count

one, two, three, four, five,

six, seven, eight, nine, ten."

" Oh! " said Jessie, " I don't count like that.

" I add :

five and five are ten.

" That is the way we do it in school."

Lesson 1

" I wish I could count as fast as you," said Tom.

" Do you know what numbers mean? " asked Jessie. " How many little birds are here? "

" Six," answered Tom. " Yes," said Jessie.

" Now draw seven boxes and put the number seven beside them." Tom did that very well. Then Jessie asked him to draw for her :

9 sticks, 8 little men,

4 houses, and 5 balls.

After that Tom wrote the numbers for each of these words : three, six, one, ten.

Then he wrote the words for each of these numbers : 2, 8, 7, 9.

When he had done that Jessie showed him the number book she used in school. Look at the next page and you will see what it was like.

Read this page again and do what Tom did. Then show your paper to your teacher.

Lesson 2

You know what is meant by adding. If you have three balls and then put two more balls beside them, you will have five balls altogether. You have added three balls and two balls.

One way of writing this is :

$$3 + 2 = 5.$$

Another way is to write one number below the other, like this :

$$\begin{array}{r} 3 \\ 2 \\ \hline 5 \end{array}$$

If we are told to add the next line of sums,

2	1	2	1	5	1	0
1	3	2	6	5	7	0

this is what they look like with the answers :

2	1	2	1	5	1	0
1	3	2	6	5	7	0
3	4	4	7	10	8	0

Do the sums on the next page in the same way. You will find the answers in the top row.

On this page you are to add :

2 1 — 3	1 3 — 4	2 2 — 4	1 6 — 7	5 5 — 10	1 7 — 8	0 0 — 0
2 2 — 4 ✓	1 6 — 7 ✓	2 1 — 3 ✓	1 3 — 4 ✓	0 0 — 0 ✓	1 7 — 8 ✓	5 5 — 10 ✓
5 5 — 10 ✓	0 0 — 0 ✓	1 7 — 8 ✓	2 2 — 4 ✓	2 1 — 3 ✓	1 6 — 7 ✓	1 3 — 4 ✓
1 7 — 8 ✓	2 1 — 3 ✓	2 2 — 4 ✓	1 3 — 4 ✓	1 6 — 7 ✓	5 5 — 10 ✓	0 0 — 0 ✓
0 0 — 0 ✓	2 1 — 3 ✓	5 5 — 10 ✓	1 6 — 7 ✓	1 7 — 8 ✓	1 3 — 4 ✓	2 2 — 4 ✓
1 3 — 4 ✓	1 7 — 8 ✓	0 0 — 0 ✓	2 1 — 3 ✓	5 5 — 10 ✓	2 2 — 4 ✓	1 6 — 7 ✓

Lesson 3

More sums to add

1 1 — 2	3 3 — 6	5 4 — 9	6 1 — 7	2 0 — 2	1 8 — 9	4 0 — 4
5 4 — 9 ✓	6 1 — 7 ✓	2 0 — 2 ✓	1 1 — 2 ✓	4 0 — 4 ✓	3 3 — 6 ✓	1 8 — 9 ✓
6 1 — 7 ✓	1 1 — 2 ✓	1 8 — 9 ✓	5 5 — 10 ✓	3 3 — 6 ✓	2 2 — 4 ✓	2 0 — 2 ✓
1 8 — 9 ✓	3 3 — 6 ✓	4 0 — 4 ✓	2 0 — 2 ✓	1 1 — 2 ✓	6 1 — 7 ✓	5 4 — 9 ✓
3 3 — 6 ✓	2 1 — 3 ✓	1 1 — 2 ✓	4 0 — 4 ✓	5 4 — 9 ✓	2 0 — 2 ✓	1 8 — 9 ✓
4 0 — 4 ✓	1 3 — 4 ✓	6 1 — 7 ✓	1 7 — 8 ✓	5 4 — 9 ✓	1 6 — 7 ✓	0 0 — 0 ✓

Would you like to know more about the boys and girls in Beacon Street?

This is a picture of Tom with his big brother Jim.

Tom has just begun to go to school. You will see that he is much smaller than Jim.

Mary and Jack have a garden. They are twins and are just the same size.

Meg is their little sister.
Meg is four years old.
Mary is taller than Meg.

Jessie has no brothers or sisters, but she has a black cat. Its name is Bell.

You will meet the other boys and girls later.

On the next pages are more sums which you will like to do.

See how fast you can work right through each page without making any mistakes.

Lesson 4

Adding again

3	4	4	2	2	7	1
1	1	4	8	5	1	5
4	5	8	10	7	8	6

4	2	3	4	7	1	2
1	8	1	4	1	5	5
5	6	4	8	8	6	7

2	4	3	1	3	1	7
8	4	3	5	1	8	1
10	8	6	6	4	9	8

7	2	1	4	2	4	3
1	5	5	1	8	4	1
8	7	6	5	10	8	4

1	4	3	2	2	6	4
5	1	1	8	5	1	1
6	5	4	10	7	7	5

2	1	7	5	4	2	4
5	1	1	4	4	0	0
7	2	8	9	8	2	4

Lesson 5 *More adding*

4	3	5	9	1	6	8
3	2	0	1	4	4	2
7	5	5	10	5	10	10

5	1	6	4	8	3	9
0	4	4	3	2	2	1

3	8	3	1	9	2	4
3	2	2	4	1	0	3

3	5	4	1	4	4	6
1	4	3	8	1	0	4

9	1	5	2	3	2	6
1	5	0	5	2	8	4

4	1	1	8	7	5	6
4	1	4	2	1	0	1

14

Lesson 6 *Stories*

It is easy to know when you are to add.
You must add when the story asks :

" How many altogether? " or " How many in all? "

1. I had four pennies in my pocket, and on the road I found one more penny. How many pennies had I altogether?

    4   pennies in my pocket
    1   penny found
    5   pennies altogether

2. If you had four pennies in your pocket and I gave you three pennies, how many pennies would you have in all?
3. One day at the seaside Jack found two pink shells, and the next day he found five more. How many did he find altogether?
4. Tom saw five boys and five girls on the sands. How many children did he see altogether?
5. Mary picked eight flowers on the way to the sands, and two on the way back. How many flowers did she pick?

15

6. Jack gave Tom two shells. His big brother Jim gave Tom two more. How many shells had Tom altogether?
7. Mary and her sister made five sand castles. Tom and Jim made four more. How many sand castles were there in all?
8. They saw one boat with white sails and six boats with brown sails. How many boats did they see altogether?
9. A man had little dogs to sell. He had six with brown spots and four with black spots. How many dogs were there in all?
10. For lunch Mary brought 3 oranges and Jim brought 2 oranges. How many was that altogether?
11. Jim and Mary made a pond round their castles. Jack carried four pails of water, and Tom carried three pails. How many pails did they carry?
12. Meg looked for big stones. She first brought two and then eight more. How many was that altogether?

Lesson 7

Add on this page

6	0	4	3	2	0	3
0	8	5	0	4	2	6
6	8	9	3	6	2	9

4	2	6	0	3	3	0
5	4	0	2	0	6	8

3	3	2	0	4	6	2
2	0	5	8	5	0	4

9	6	4	3	8	4	0
1	0	3	1	2	1	2

0	4	3	1	0	3	7
2	4	0	4	8	6	1

2	2	4	5	6	1	3
4	8	5	0	4	5	6

Lesson 8 + *More adding*

0	6	8	0	1	7	0
4	2	1	5	9	2	1
4	8	9	5	10	9	1

8	0	7	0	6	0	1
1	1	2	4	2	5	9

4	0	6	3	8	0	0
3	5	2	0	1	1	4

4	0	6	3	2	9	6
5	4	0	2	4	1	4

0	7	1	6	0	1	8
5	2	4	2	1	9	2

3	1	0	7	5	8	0
6	9	8	2	0	1	2

At the Zoo

Tom went to the Zoo yesterday.

1. He climbed up six steps to see the lions.
   Then he had to go up two steps more.
   How many steps did he climb in all?

2. The mother lion had three baby lions.
   How many lions was that in all?

3. Jim saw four big bears and five little bears.
   How many was that in all?

4. Jessie bought buns for the bears. She threw
   three buns and then six buns to the bears.
   " That was 9," said Tom. Was he right?

5. Tom had a ride on the elephant with seven
   other boys. How many did the elephant
   carry altogether?

6. Jack brought nuts for the monkeys. He gave
   four nuts to one monkey, and four more to
   another monkey. How many nuts was that?

Lesson 9   *Adding again*

0	5	0	7	0	5	1
7	1	9	0	3	3	2
7	**6**	**9**	**7**	**3**	**8**	**3**

5	7	0	1	5	0	0
1	0	7	2	3	9	3

0	0	3	5	0	1	5
9	3	6	3	7	9	1

7	0	4	0	2	0	7
0	4	5	7	4	8	2

0	3	5	0	1	7	0
5	0	1	3	2	0	9

6	5	0	8	1	6	0
2	3	1	1	2	0	2

20

Lesson 10   *More adding*

4	5	1	8	4	8	2
2	2	0	0	8	4	7
6	**7**	**1**	**8**	**12**	**12**	**9**

8	4	4	5	8	2	1
0	2	8	2	4	7	0

1	4	2	5	4	7	5
0	8	7	1	2	0	2

8	0	4	6	1	5	8
4	7	2	2	9	3	0

4	0	8	7	5	0	8
8	4	4	2	2	1	0

0	1	0	2	0	1	8
5	0	3	7	9	2	1

21

Lesson 11   *Words which tell us to add*

There are different ways of telling us to add.
Sometimes numbers are written down like this :

$$4 + 2 = \quad .$$

Sometimes words are used like this :

> Find the sum of 4 and 2.
> What is the total if we add 4 and 2?

You know that all these mean the same thing.
They mean that we are to add 4 and 2.

Write down the answers to the next lines :
1. What is the sum of 3 and 2?
2. What is the total if we add 2 and 2?
3. $1 + 3 = \quad .$
4. How many are 4 and 3 altogether?
5. Find the sum of 3 and 3.
6. $6 + 2 = \quad .$
7. What is the total if we add 8 and 2?
8. Find the sum of 9 and 1.
9. How many are 4 and 8 altogether?
10. What is the sum of 5 and 3?

Lesson 12   *Something to do*

You know what a penny is like.
Go to the box of money and count out eleven pennies.

Take your pencil and write down that you have eleven pennies. Write it like this :

I have 11 d.

We write d. after the 11 to show that it means 11 pennies.

Find the answers to these sums.

Write d. after the answers to show they are pennies. You can use the money if you wish.
1. Find the sum of eight pennies and one penny.
   The answer is 9 d. because $8 + 1 = 9$.
   The d. shows that we are working with pennies.
2. What is the total if we add 5 d. and 3 d.?
3. I have 7 d. and 2 d. How much is that?
4. How many pennies do I need to count out to give 3 d. to Meg and 6 d. to Mary?
5. I thought I had nine pennies, but I found I had one penny more. How much had I?

Lesson 13
A page to climb on

Add :

0	7	9	1	4	2	4
7	0	1	9	2	4	3
7	**7**	**10**	**10**	**6**	**6**	**7**
8	3	0	1	5	0	5
1	6	1	0	0	5	2
9	**9**	**1**	**1**	**5**	**5**	**7**
6	4	8	3	5	8	0
0	8	4	2	1	0	8
6	**12**	**12**	**5**	**6**	**8**	**8**
1	7	2	6	4	0	3
4	2	7	2	5	3	0
5	**9**	**9**	**8**	**9**	**3**	**3**
0	5	1	8	8	2	0
9	3	0	4	0	7	2
9	**8**	**1**	**12**	**8**	**9**	**2**
4	5	0	1	8	6	4
8	2	4	2	2	4	2
12	**7**	**4**	**3**	**10**	**10**	**6**

Pupils' own test 1

Add :

2	0	1	2	9	4	6
1	0	8	5	1	5	2
3	**0**	**9**	**7**	**10**		
1	1	4	7	1	3	8
3	1	0	1	4	0	1
2	3	3	1	6	2	0
2	3	1	5	4	4	5
1	5	4	4	8	0	1
6	4	1	3	2	2	9
5	6	4	3	6	3	7
5	1	4	2	0	6	2
1	2	2	5	0	0	0
7	0	8	0	8	4	1

A page to race on

On this page you are to add.

How many sums can you do in three minutes?

3	1	6	2	0	0	5
1	5	4	4	5	9	2

4	4	8	0	1	7	1
1	3	2	2	9	0	0

4	3	6	3	7	0	8
4	2	0	6	2	3	0

2	5	0	0	0	5	4
8	0	8	4	1	3	8

2	9	4	6	0	1	8
5	1	5	2	7	2	4

Show your paper to your teacher, and ask if you may go on to the next chapter.

Chapter II — Subtracting

Mary was picking roses. When she had picked four roses, she gave two of them to her little sister Meg.

" How many have you left? " said Meg.

" I have two left," said Mary.

" I can tell you that without counting for we do subtraction at school."

When you have done the next pages you will be able to subtract as well as Mary did.

Lesson 14 *A missing number game*

Here is another way of asking us to add :

$$2 + \ \ = 3.$$

We read it like this :

2 and *what* are 3 ?

The answer is 1, because 2 and 1 are 3.

Try to fill in the missing numbers in these sums :

$$1 + 3 = 4. \qquad 5 + 5 = 10.$$

$$2 + 2 = 4. \qquad 1 + 7 = 8.$$

$$1 + 6 = 7. \qquad 0 + 0 = 0.$$

Now see if you can fill in the missing numbers in the addition sums below. They mean just the same thing. 1 and *what* are 2? and so on.

1	3	5	6	2	1	4
1	3	4	1	2	8	0
2	6	9	7	2	9	4

0	5	0	7	0	5	1
7	1	9	0	3	3	2
7	6	9	7	3	8	3

Lesson 15 *Subtracting*

You know what is meant by subtracting.

If you have five balls, and take away two of them, you are left with three balls.

You have subtracted two balls from five balls.

One way of writing this is : $5 - 2 = 3.$

Or, you can write one figure below the other : 5

Ask yourself, " Two and *what* are five? " $\underline{2}$

Then write the answer like this : 3

If we are told to subtract the following,

3	4	3	6	2	10
2	2	3	3	2	5

this is what they look like with the answers :

3	4	3	6	2	10
2	2	3	3	2	5
1	2	0	3	0	5

Now do the next page in the same way.
You will find all the answers in the top row.

On this page you are to subtract :

3	4	4	7	10	8	0
2	1	2	1	5	1	0
1	3	2	6	5	7	0

7	3	10	4	0	4	8
1	2	5	1	0	2	1

4	10	7	3	0	8	4
1	5	1	2	0	1	2

4	8	4	10	3	7	0
2	1	1	5	2	1	0

10	7	3	0	4	4	8
5	1	2	0	2	1	1

8	4	0	10	7	3	4
1	2	0	5	1	2	1

30

Lesson 16

More subtracting

2	6	9	7	2	9	4
1	3	5	6	2	1	4
1	3	4	1	0	8	0

9	2	7	6	4	2	9
5	1	6	3	4	2	1

4	7	9	2	3	9	4
2	6	1	1	2	5	4

2	9	2	4	6	7	9
2	5	1	4	3	6	1

9	2	4	6	2	10	8
1	2	4	3	1	5	1

7	4	6	7	9	2	0
6	1	3	1	5	2	0

31

Playing at races

Jean, Mary, Jack and Jim are all ready to play at races.

Their teacher is going to show each of them a "question-answer" card like this:

$$3 - 2 = \quad$$

If Jean's answer is right she will step forward one step. If she is wrong she will step back.

Then Mary and Jack and Jim will have a turn.

The winner will be the one who gets to the blackboard first.

The class is watching and will call "Back" every time an answer is wrong.

Play this game with your friends.

Lesson 17   *Can you still do this?*

Fill in the missing numbers. Remember that we read the first one " 4 and *what* are 8 ? "

4	2	2	1	4	3	5
8	10	7	6	7	5	5

9	8	6	6	0	4	3
10	10	10	6	8	9	3

2	0	3	0	6	0	1
6	2	9	4	8	5	10

7	0	4	5	1	8	4
9	1	6	7	1	8	12

8	2	5	0	5	0	0
12	9	10	0	9	2	3

Lesson 18 — *Subtracting again*

4	5	8	10	7	8	6
3	4	4	2	2	7	1
1	**1**	**4**	**8**	**5**	**1**	**5**

5	10	4	8	8	6	7
4	2	3	4	7	1	2

9	4	7	2	8	10	6
5	3	2	1	7	2	1

10	6	5	7	8	4	8
2	1	4	2	4	3	7

6	7	5	4	8	6	10
1	2	4	3	4	3	2

7	5	2	8	9	8	4
6	4	2	7	1	4	4

Lesson 19 — *More subtracting*

7	5	5	10	5	10	10
4	3	5	9	1	6	8
3	**2**	**0**	**1**	**4**	**4**	**2**

5	10	7	5	10	10	5
3	9	4	5	6	8	1

8	5	10	5	10	7	5
7	1	6	1	8	4	5

4	10	5	7	5	2	6
3	8	4	2	5	1	3

10	8	7	10	9	5	7
6	4	4	9	5	3	6

10	5	9	6	2	10	4
2	3	1	1	2	9	4

Lesson 20 *Words for subtraction*

There are different ways of telling us that we are to subtract.

Sometimes numbers are written like this :

$$5 - 2 = \quad .$$

Sometimes words are used like this :

Two and what are 5 ?

From 5 take away 2.

How much is left if I take 2 away from 5 ?

How many more is 5 than 2 ?

You know that all these mean the same thing.
They mean that we are to subtract 2 from 5.

Write down the answers to the next lines :

1. From 8 take away 5.
2. How many more is 6 than 2 ?
3. $4 - 2 = \quad .$
4. How much is left if I take away 4 from 9 ?
5. How many more is 10 than 2 ?
6. $5 - 1 = \quad .$
7. Four and what are 7 ?
8. What is left if I take away 3 from 5 ?

Lesson 21 *Stories*

It is easy to know when you are to subtract.
You must subtract when the story asks :

" How many were left? " or " What was left? "

1. Mother had three pennies in her bag.
   If she gave me two how many had she left?

   3 pennies in her bag
   2 pennies to me
   ___
   1 penny left

2. I had six pennies and
   I spent three of them.
   How much had I left?

3. Tom had seven pennies
   in his pocket. He bought an orange this morning which cost two pennies.
   How many pennies had he left?

4. Our room had four pictures. Jack broke one today. How many have we left?

5. Mary brought ten roses to school. She gave two to Jean and the rest to the teacher. How many did the teacher get?

6. We had two balls this morning when we went out to play. We lost one over the wall. How many are left?

7. Jean's ball cost 2 d. She gave the shopman sixpence. How much did she get back?

8. Jack had 8 d. He spent 7 d. on a new ball. How much had he left?

9. Jean gave the two roses to her mother when she got home.
   How many had she left?

10. Jessie's cat had 4 kittens. One was white and the others were black.
    How many were black?

11. She gave away three of the kittens. How many were left?

12. There were five glasses on her table. The little white kitten broke four. How many were left?

13. Jessie had three cakes for tea. The kitten stole one. How many were left?

Lesson 22   *Some new subtractions*

6	8	9	3	6	2	9
6	0	4	3	2	0	3
0	8	5	0	4	2	6

9	3	6	8	2	9	6
4	3	6	0	0	3	2

8	6	8	5	6	2	9
0	2	7	1	6	0	4

7	2	5	8	4	5	10
4	0	3	4	3	4	2

3	6	10	6	8	7	9
3	6	6	2	0	2	3

10	5	3	10	9	9	6
9	5	3	8	3	4	1

Lesson 23

More subtractions

4	8	9	5	10	9	1
0	6	8	0	1	7	0
4	2	1	5	9	2	1

9	10	1	4	8	5	9
8	1	0	0	6	0	7

10	8	8	9	9	1	4
9	0	6	7	8	0	0

7	6	10	9	5	5	5
4	6	1	4	0	3	5

5	9	4	6	10	8	5
0	8	0	2	1	6	1

10	3	2	9	9	10	1
6	3	0	7	3	8	0

Stories again!

1. Jean had six buttons on her coat. She lost one. How many were left?

2. Jack had nine pennies and he spent one penny on a pencil. How much had he left?

3. Mary had ten pennies and she spent six on a box of crayons. How much had she left?

4. Jim had three pet rabbits. He sold two. How many were left?

5. Meg had four dolls. Jack's dog ran away with two of them. How many were left?

6. Jessie put 8 cups on the table. Tom broke one. How many were left?

7. Jessie's room had 6 chairs. She and Mary sat on 2. How many were empty?

8. Her mother gave them five cakes for tea. They ate five. How many were left?

Lesson 24   *Subtracting again*

| 7 | 6 | 9 | 7 | 3 | 8 | 3 |
0	5	0	7	0	5	1
7	1	9	0	3	3	2

| 7 | 3 | 7 | 8 | 6 | 3 | 9 |
| 7 | 0 | 0 | 5 | 5 | 1 | 0 |

| 3 | 5 | 3 | 7 | 7 | 3 | 8 |
| 3 | 0 | 1 | 7 | 0 | 0 | 5 |

| 4 | 8 | 9 | 1 | 6 | 8 | 6 |
| 0 | 5 | 8 | 0 | 6 | 0 | 2 |

| 9 | 7 | 8 | 7 | 9 | 6 | 2 |
| 0 | 0 | 6 | 7 | 4 | 5 | 0 |

| 3 | 10 | 9 | 9 | 6 | 9 | 3 |
| 0 | 1 | 0 | 7 | 5 | 3 | 1 |

Lesson 25   *Still more subtracting*

| 6 | 7 | 1 | 8 | 12 | 12 | 9 |
4	5	1	8	4	8	2
2	2	0	0	8	4	7

| 7 | 8 | 6 | 9 | 12 | 1 | 12 |
| 5 | 8 | 4 | 2 | 8 | 1 | 4 |

| 8 | 12 | 1 | 7 | 6 | 6 | 12 |
| 6 | 4 | 1 | 5 | 4 | 5 | 8 |

| 7 | 7 | 3 | 8 | 8 | 9 | 5 |
| 0 | 7 | 0 | 8 | 5 | 8 | 0 |

| 9 | 6 | 4 | 1 | 8 | 7 | 10 |
| 2 | 4 | 0 | 1 | 8 | 5 | 1 |

| 12 | 9 | 9 | 1 | 12 | 9 | 3 |
| 8 | 0 | 2 | 0 | 4 | 7 | 1 |

Lesson 26 *More stories*

One way of telling us to subtract is to say :

" What was left? " or " How many were left? "

Another way is to say :

" How much more? " or " How many more? "

1. A bat cost 11 d. and a ball cost 6 d. How much more did the bat cost than the ball?

     11   pennies for the bat

     <u>6</u>   pennies for the ball

     5   pennies   The answer is 5 d.

2. From nine pennies take away four pennies.

3. My ball cost 5 d. and Jack's cost 9 d. How much more did Jack's cost than mine?

4. If I had 8 d. and spent 5 d., how much should I have left?

5. Meg had 7 d. in her purse. She bought a ball for 5 d. How much had she left?

6. Last week Jim read four stories and Jack read one story. How many more did Jim read than Jack?

7. An apple cost 1 d. I gave the shopman 3 d. How much change should I get?

8. A toy pail cost 6 d. and a spade cost 2 d. How much more did the pail cost?

9. Tom put 9 shells in his pail. Going home he lost one. How many were left?

10. He made 6 sand-castles. One fell down. How many were left?

11. Meg picked 9 daisies to give to her mother. Then she picked 3 for Mary. How many more daisies had her mother?

12. Her mother picked 3 roses and Meg carried them into the house without dropping any. How many did she take into the house?

13. Jack paid 10 d. for one story-book and 6 d. for another. How much more did the first book cost?

14. Mary had 7 sums right in arithmetic today and Jack had 4. How many more had Mary than Jack?

15. Jim did 4 sums while Jean did 3 sums. How many more did Jim do than Jean?

Lesson 27

A page to climb on

Subtract :

10	3	12	8	9	6	8
6	0	4	6	5	4	0
4	3	8	2	4	2	8

5	8	7	10	7	6	2
0	0	4	9	6	1	0
5	8	3	1	1	5	2

10	2	9	1	8	2	9
8	0	3	0	7	1	7
2	2	6	1	1	1	2

7	9	9	10	4	8	9
0	7	0	1	1	5	4
7	2	9	9	3	3	5

9	12	7	6	2	6	4
4	8	2	2	2	3	0
5	4	5	4	0	3	4

8	4	9	10	7	10	3
8	0	2	2	5	6	0
0	4	7	8	2	4	3

Pupils' own test 2

Subtract :

3	10	5	3	12	8	7
0	6	0	3	8	4	2

4	7	9	6	5	5	2
0	0	2	6	3	5	1

9	9	0	4	9	4	6
4	3	0	2	1	3	1

9	8	5	8	4	7	6
7	8	1	1	4	1	4

2	10	7	1	9	3	7
0	8	7	1	8	1	5

8	8	3	5	6	6	2
0	5	2	4	5	3	2

A page to race on

On this page you are to subtract.

How many can you do in three minutes?

8	4	7	6	10	8	4
1	4	1	4	9	8	0

1	9	3	7	7	10	9
1	8	1	5	2	8	4

5	6	6	2	9	8	9
4	5	3	2	0	5	7

5	8	1	10	12	9	2
3	4	0	5	4	2	0

12	5	2	8	7	5	8
8	5	1	6	0	0	0

Show your paper to your teacher, and ask if you may go on to the next chapter.

Chapter III   Adding
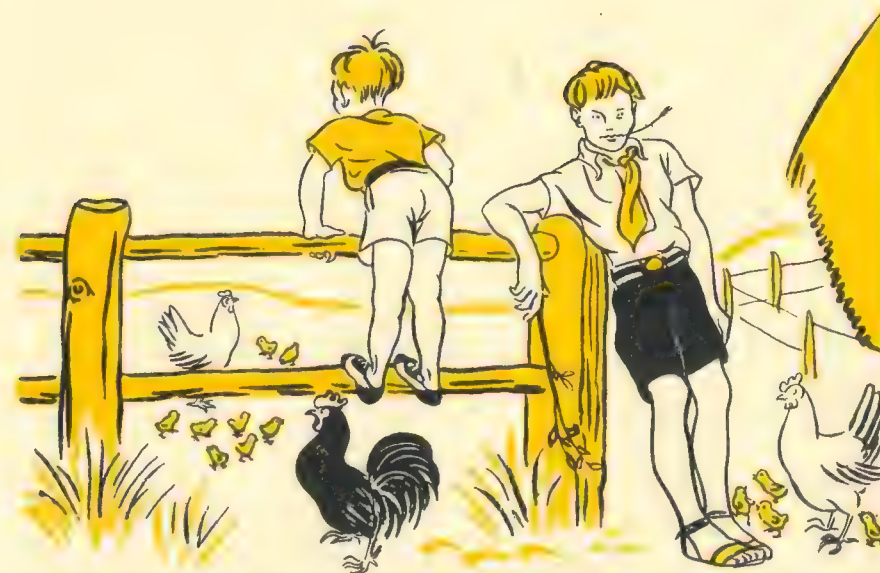
Tom and Jim went to a farm for their holiday.

They saw so many things that Tom wished he could add with larger numbers.

" I saw one hen with four chickens, and another one with eight chickens," he said.

" That was twelve chickens in all," said Jim at once.

This chapter will show you the numbers that Jim was able to add.

Lesson 28 *Something to do*

Copy this line of subtractions and write the answers below them:

3	4	4	7	10	8	0
2	1	2	1	5	1	0

Did you get these answers?

1	3	2	6	5	7	0

Now add the answer to the bottom number in each subtraction. Your new answers should look like this:

3	4	4	7	10	8	0

What can you find out about these new answers?

They are the same as the top row of numbers!

Now copy and work out these subtractions:

2	6	9	7	2	9	4
1	3	5	6	2	1	4

Then add each answer and bottom number together. Write down each new answer, and see if it is the same as the top number.

Lesson 29 *Words which tell us to add*

There are different ways of telling us to add. Sometimes a sum is written like this:

$$3 + 2 = \ .$$

The mark $+$ tells us that we are to add.

We read the sum: " Three and two are . "

Sometimes we are told to add a sum which is set down like this:

3
2

Sometimes words are used like this:

What is the sum of 3 and 2?

Find the sum of 3 and 2.

What is the total when we add 3 and 2?

Find the total when we add 3 and 2.

How many are 3 and 2 altogether?

Try to answer the following questions:

1. What is the sum of 4 and 2?
2. $5 + 2 = \ .$
3. How many are 4 and 8 altogether?
4. Find the sum of 8 and 0.
5. What is the total when we add 2 and 7?
6. Find the total when we add 1 and 0.

1. This is Tweed the farmer's dog. He caught a rabbit one day, and the next day he caught four more. How many was that in all?

2. He found two lost sheep and then he found seven. How many was that?

3. Tweed brings the chickens in at night. He brought in five. Then he found another. What was the total number he brought in?

4. Tom counted eight white ducks and one with black wings. How many was that altogether?

5. Jim helped to collect the eggs. When he went into the henhouse he saw three hens sitting. Two flew away. How many were left?

6. He found four eggs in one nest and two in another. How many did that make?

7. In another nest he saw one white and seven brown eggs. How many were in that nest?

Lesson 30 *Something more to do*

Copy these subtractions and work them out:

4	5	8	10	7	8	6
3	4	4	2	2	7	1

Now add the answers and the bottom numbers together and see if you get the top numbers.

Do the same with these subtractions:

7	5	5	10	5	10	10
4	3	5	9	1	6	8

6	8	9	3	6	2	9
6	0	4	3	2	0	3

4	8	9	5	10	9	1
0	6	8	0	1	7	0

7	6	9	7	3	8	3
0	5	0	7	0	5	1

Lesson 31
Sums to add

8	9	7	9	2	6	8
8	2	7	9	9	6	3
16	11	14	18	11	12	11

6	7	2	8	8	9	9
6	7	9	8	3	9	2

0	2	8	6	9	7	8
9	7	3	6	2	7	8

0	8	1	9	8	8	0
7	8	0	2	0	4	3

1	9	7	5	4	8	2
2	9	7	1	2	3	9

2	5	6	7	9	5	4
9	3	6	0	9	2	8

Lesson 32
Adding again

7	6	3	2	3	3	3
3	3	5	3	9	4	8
10	9	8	5	12	7	11

2	3	7	3	3	3	6
3	9	3	4	5	8	3

6	3	6	8	2	7	3
3	4	6	0	3	3	5

8	7	4	1	4	2	8
8	3	2	0	8	9	3

3	3	9	6	7	2	3
4	8	2	3	7	3	9

3	9	5	8	3	2	3
5	9	2	4	8	7	9

Lesson 33 *More adding*

6	0	9	2	9	3	9
5	6	3	6	0	7	3
11	6	12	8	9	10	

2	3	6	0	9	9	0
6	7	5	6	3	0	6

0	3	9	9	3	2	6
6	4	2	3	7	6	5

9	6	8	6	7	3	8
0	3	8	5	7	9	3

7	6	9	3	0	9	2
3	5	0	7	6	9	3

9	6	2	2	3	2	3
3	6	6	9	5	6	8

56

1. This is one of Jessie's kittens. She gave it to the farmer's wife. It tried to climb up the tablecloth and pulled off three cups. Tom found three cups left on the table. How many were there before?
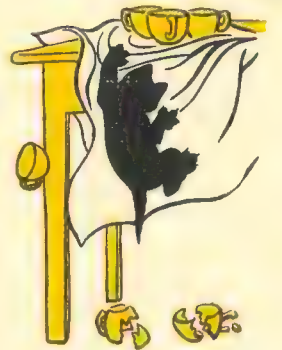
2. The farmer's wife asked Jim to buy her three new cups. She gave him 10 d. The three cups cost 6 d. How many pennies had he left?

3. Next day there was a visitor to tea, and they needed seven cups and seven saucers. How many cups and saucers was that in all?

4. Tom took the visitor out to see the farm. They saw 2 cows in one field and 9 in another. What was the total number of cows?

5. In another field they saw 3 cows and 8 horses. How many animals was that?

6. Tom went to feed the chickens. He took 6 handfuls of one kind of corn and 3 handfuls of another. How many handfuls was that?

57

9	7	7	4	5	6	5
8	4	6	6	6	7	6
17	11	13	10	11	13	

7	4	9	6	7	5	7
6	6	8	7	6	6	4

2	7	5	7	4	9	7
3	3	6	4	6	8	6

6	6	3	9	0	3	6
7	3	7	8	6	9	7

7	6	4	9	3	4	6
4	5	6	3	5	6	7

9	5	3	7	3	2	7
0	6	8	6	4	6	4

Go to the box of money and take out one penny and two halfpennies.

Write in your book :

Two halfpennies are equal to one penny.

A halfpenny is half of a penny.

Remember that when we write d. after a number, it means that we are thinking of pennies.

A halfpenny is written like this :

$$\tfrac{1}{2}\,\text{d.}$$

This shows that we have divided the penny into two equal parts and are thinking of one of them.

Two   halfpennies make   1 d.

Three halfpennies make $1\tfrac{1}{2}$ d.

Take your box of money ; count out halfpennies in piles with two in each, and finish these lines :

Five halfpennies make   d.

Six   ,,   ,,   d.

More pennies and halfpennies

Use the box of money if you need to.

1. How many pennies could you get for four halfpennies? The answer is 2 d., because two halfpennies make one penny, and the other two make another penny.
2. Three halfpennies make   d.
3. Do you know how many pennies I could get for 6 halfpennies?
4. Seven halfpennies are equal to   d.
5. Fourteen halfpennies make   d.
6. Ten halfpennies are the same as   d.
7. How many halfpennies make 5 pennies?
8. 4 d. =   halfpennies.
9. 5½ d. =   halfpennies.
10. 4½ d. =   halfpennies.
11. For six pennies I could get   halfpennies.
12. 3 d. is equal to   halfpennies.
13. Thirteen halfpennies make   pennies.
14. Fifteen halfpennies make   pennies.
15. Seventeen halfpennies make   pennies.
16. 8 d. is equal to   halfpennies.

Lesson 36

More sums to add

9	9	4	7	4	8	9
4	5	9	5	7	6	4
13	14	13	12	11	14	

7	4	9	8	9	4	0
5	7	5	6	4	9	6

3	4	8	9	7	8	9
7	6	6	4	5	6	5

7	9	4	4	9	9	3
4	5	7	9	3	0	7

6	7	9	4	7	6	4
5	5	8	7	6	7	9

8	5	2	7	9	4	9
6	6	6	5	8	7	0

8	5	9	8	7	5	8
9	9	6	7	8	7	9
17	14	15	15	15	12	

9	7	5	5	9	9	8
6	8	9	7	6	4	7

8	4	7	8	9	7	5
7	6	6	9	6	8	9

5	7	9	5	7	9	4
9	8	5	7	5	6	7

9	5	7	6	8	8	5
8	7	8	7	9	7	6

8	8	4	8	7	5	5
7	6	9	9	4	9	7

6	6	9	5	7	8	6
9	8	7	8	9	5	9
15	14	16	13	16	13	

9	5	8	6	6	7	8
7	8	5	9	8	9	5

4	7	6	6	5	7	9
9	8	9	8	8	9	7

8	9	9	5	5	9	8
9	7	4	9	7	5	5

6	8	8	5	7	9	6
8	7	5	8	9	7	8

8	6	9	7	5	9	7
5	9	6	9	8	7	9

Rabbits

1. One day Jim went out to look for rabbits. He saw nine and then Tweed ran out and chased seven more. How many was that altogether?
2. Tweed caught one of the seven rabbits that he chased. How many got away from him?
3. The farmer had six little turkeys and bought nine more. How many did that make?
4. The pigs got 7 pounds of potatoes one day and 8 pounds another day. How much was that altogether?

5. Jim walked down to the village. It was four miles there and four miles back. How far did he walk altogether?
6. Tom counted the trees in the garden. There were six on one side and eight on the other. What was the total number of trees?

Lesson 39

A page to climb on

Add :

8	9	7	3	6	9	3
9	8	3	7	9	6	4

7	4	5	6	7	8	6
4	7	6	5	8	7	8

8	9	4	7	5	0	8
6	4	9	5	7	6	8

6	7	2	9	5	4	3
7	6	3	5	9	6	5

9	3	9	5	8	9	7
3	9	9	8	5	7	9

On the next three pages is a test for you to do. Work it right through to the end.

Add :

0	4	1	6	1	0	2
0	5	1	2	8	7	5
9	1	3	3	8	4	5
1	7	0	3	1	0	1
7	1	5	2	2	0	3
1	4	5	4	1	5	1
0	1	6	1	0	5	1
9	5	4	6	2	4	9
4	7	4	8	2	3	6
1	0	3	2	2	6	1

(Go on to the next page.)

Add :

7	4	0	3	6	1	0
2	4	3	2	0	3	4
2	0	2	5	5	0	1
0	1	8	3	0	8	2
9	2	9	8	8	3	6
8	7	4	3	9	8	9
4	7	8	9	7	5	6
2	4	8	5	3	9	5
6	5	7	9	4	6	9
8	2	6	2	9	3	6

(Go on to the next page.)

Add :

0	9	1	4	7	7	3
6	7	0	6	7	5	5

8	9	5	8	5	9	4
7	3	8	0	6	9	7

2	7	2	7	4	6	2
3	8	6	9	8	7	9

8	3	5	9	8	8	3
6	9	7	0	5	4	4

6	3
6	7

(Learn over again any addition in which you have made a mistake.)

68

On this page you are to add.

How many sums can you do in three minutes?

6	0	3	2	7	0	8
0	7	6	1	2	0	0

9	0	5	0	1	0	6
4	8	1	4	3	1	7

4	9	4	0	6	2	1
8	5	5	9	2	2	2

9	8	4	3	7	8	1
8	4	9	0	0	1	6

4	7	2	7	2	0	0
2	4	7	5	4	3	5

(Go on to the next page.)

69

On this page you are to add:

5	5	7+	5+	4+	0+	5+
5	2	6	6	7	2	3
10	*7*	*13*	*11*	*11*	*2*	*9*

1+	1+	1+	4	8+	8	6
9	7	0	6	6	9	8

1	4	3	9	6	6	5
1	3	1	2	5	3	9

9	3	5	4	7	0	3
7	3	0	1	7	6	5

9	5	5	9	4	9	9
6	8	4	1	4	9	3

(Go on to the next page.)

On this page you are to add:

2	8	7	6	1	2	2
3	7	9	1	4	8	9

2	3	7	8	2	6	2
6	9	8	5	0	4	5

6	9	3	5	7	1	8
6	0	4	7	3	8	2

7	8	3	3	6	3	4
1	3	7	8	9	2	0

8	1
8	5

Show your paper to your teacher and ask if you may go on to the next chapter.

Chapter IV   Subtracting

Mary likes to feed the birds in her garden.

How many birds are there on the fence?

Count the birds on the ground.

How many more birds are there on the ground than on the fence?

This chapter will help you to answer this question by subtraction.

When Meg ran out, four of the seven birds on the fence flew away.   How many were left?

Lesson 40   *Something to do*

Do you know what is meant by *tens* and *units*— bundles of tens and odd ones?

One bundle of ten and three odd ones, or units, make thirteen.

We write its name like this : 13.

One ten and four units make fourteen : 14.

One ten and five units make fifteen : 15.

Finish the next lines, using sticks to count with if you do not remember the answer at once.

1. One ten and six units make   .

2. One ten and seven units make   . .

3. 18 :   Eighteen is made up of one ten and   units.

4. One ten and one unit make   : 11.

5. One ten and two units make twelve :   .

6. Write the numbers for sixteen, thirteen, eleven.

7. Write the names for 12,   17, 15.

8. What is the name for one ten and eight units?

Lesson 41 *Words for subtraction*

Here are five different ways of telling us to take away or subtract.

  1. Find the difference between 3 and 2.
  2. Take 2 from 3.
  3. 2 from 3 is   .
  4. By how much is 3 greater than 2?
  5. How much is 2 less than 3?

These all mean the same as :

Subtract 2 from 3. Subtract $\frac{3}{2}$ or $3 - 2 =$

They mean that we are to take 2 away from 3.

Try to write the answers to the following lines :

1. Find the difference between 6 and 4.
2. Take 5 from 7.
3. $1 - 1 =$.
4. Subtract 4 from 12.
5. By how much is 9 greater than 2?
6. $12 - 8 =$.
7. 8 from 8 is   .
8. How much is 3 less than 6?

74

1. There were nine apples on one of Mary's trees. Two of the apples fell off. How many were left?
2. Mary's father said there were five roses out. Mary picked five. How many were left?
3. Mary planted nine lilies, and Jack planted seven. How many less did Jack plant than Mary?
4. Six of Mary's lilies and five of Jack's had flowers. How many more flowers had Mary than Jack?
5. Meg picked daisies to make a daisy chain. She picked nine and then she picked two more. How many was that altogether?
6. She saw four bees on the flowers. Two flew away. How many were left?
7. Jack and Meg collected stones to make a heap. Jack brought twelve and Meg brought four. How many more did Jack bring than Meg?
8. Jack brought two pails of water and then six more. How many was that?

75

Lesson 42 *Subtract on this page*

16	11	14	18	11	12	11
8	9	7	9	2	6	8
8	2	7	9	9	6	3

18	12	16	11	14	11	11
9	6	8	9	7	8	2

8	14	11	18	16	11	9
8	7	2	9	8	9	0

6	6	7	11	12	7	7
4	5	5	8	4	0	7

1	18	12	16	11	14	3
1	9	6	8	8	7	0

3	12	11	8	12	11	9
1	8	2	5	6	9	2

Lesson 43 *Subtracting again*

10	9	8	5	12	7	11
7	6	3	2	3	3	3
3	3	5	3	9	4	8

7	12	11	10	9	8	5
3	3	3	7	6	3	2

8	10	11	9	11	12	7
8	7	2	6	3	3	3

16	6	12	12	8	7	1
8	4	3	6	3	5	1

11	9	5	10	14	8	12
9	6	2	7	7	3	4

5	11	11	18	7	12	9
2	8	3	9	3	8	2

Missing words

Can you fill in the missing words?

If you do not remember about the boys and girls in Beacon Street, turn back to Lesson 3.

Bigger or *smaller?*

Jim is much _____ than his little brother Tom.

Tom is _____ than Jim.

Taller or *shorter?*

Meg is much _____ than her sister Mary.

Mary is _____ than Meg.

More or *fewer?*

There are _____ children in Meg's home than in Jessie's.

There are _____ children in Jessie's home.

Equal or *not equal?*

Mary and Jack are _____ in size.

Mary and Meg are _____ in size.

Older or *younger?*

Jim is _____ than his brother Tom.

Tom is _____ than Jim.

More subtracting

11	6	12	8	9	10	11
6	0	9	2	9	3	6
5	6	3	6	0	7	

9	10	6	11	10	8	12
9	3	0	6	7	2	9

12	11	8	10	6	12	11
6	6	2	3	0	9	2

8	6	9	5	16	11	14
3	0	9	2	8	9	7

6	10	8	11	18	9	12
0	3	2	6	9	6	9

11	7	12	11	12	9	8
3	3	3	8	9	9	2

17	11	13	10	11	13	17
9	7	7	4	5	6	9
8	4	6	6	6	7	

11	13	11	6	10	13	11
6	6	5	0	4	7	7

8	13	17	9	11	13	12
3	7	9	6	7	6	9

11	8	13	9	13	10	10
5	2	6	9	7	3	7

11	11	10	17	5	12	7
5	7	4	9	2	3	3

11	17	10	11	10	11	13
3	9	4	7	4	5	7

Lesson 46   *Something to do*

You remember what is meant by tens and units : bundles of ten and odd ones.

One bundle of ten and four units make 14.

What is the name for one ten and nine units?
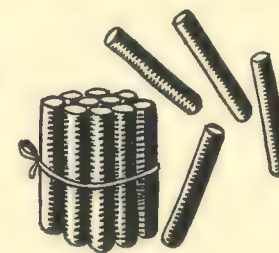
The name for two tens and no units is twenty, and that number is written 20.

The name for two tens and one unit is twenty-one : 21.

Two tens and two units are twenty-two : 22.

Try to finish the next lines, using sticks to count with if you need them.

1. Two tens and three units are twenty-three :   .

2. Two tens and four units are   : 24.

3. Two tens and five units are   :   .

4. Two tens and six units are   :   .

5. 27 : twenty-seven is made up of two tens and   units.

6. 28 : twenty-eight is made up of two tens and   units.

When we have to work sums with pennies, we put the d., which stands for pennies, at the top of the sum.

Find the sum of $8\frac{1}{2}$ d. and 3 d.

$$
\begin{array}{r}
\text{d.} \\
8\frac{1}{2} \\
3 \\
\hline
11\frac{1}{2}
\end{array}
$$

The answer is $11\frac{1}{2}$ d. One halfpenny and no half-pennies makes one halfpenny, and $8 + 3 = 11$.

Write the answers to these additions :

d.	d.	d.	d.	d.
6	3	$6\frac{1}{2}$	2	$3\frac{1}{2}$
$3\frac{1}{2}$	5	5	$6\frac{1}{2}$	7

d.	d.	d.	d.	d.
$4\frac{1}{2}$	$1\frac{1}{2}$	4	2	5
5	9	$2\frac{1}{2}$	$7\frac{1}{2}$	2

Write the answers to these subtractions :

d.	d.	d.	d.	d.
11	$10\frac{1}{2}$	$5\frac{1}{2}$	$8\frac{1}{2}$	10
9	7	2	3	4

1. If you bought a 2 d. orange, a 2 d. bar of choco-late, and a bag of sweets at 3 d., how much would you have spent altogether?

2. Jack bought a knife which cost 8 d. He had $11\frac{1}{2}$ d. How much would he have left?

3. I have 6 d. How many half-pennies can I get for it?

4. Jean paid $5\frac{1}{2}$ d. for a pound of apples and 4 d. for a box of dates. How much did she spend?

5. Jim has $6\frac{1}{2}$ d. and I have $4\frac{1}{2}$ d. How much less have I than Jim?

6. I had six pennies this morning and I spent two pennies on sweets.
   How many pennies had I left?

Turn back to page 48. See how many of the subtractions you can now do in three minutes.

Using some number words

Tom has two pet rabbits and Jim has three.

1. How many fewer rabbits has Tom?
2. How many more has Jim than Tom?
3. Jim has a handful of thirteen carrots for his rabbits. Tom has seven. How much bigger is Jim's bunch?
4. How much smaller is Tom's?
5. Jim's cousin Ned is sixteen years old, and Jim is eight years old. How much older is Ned?
6. How much younger is Jim?
7. Jessie's father is six feet tall and Jessie is four feet tall. How much shorter is Jessie?
8. How much taller is her father?
9. Meg's mother is five feet tall and Meg is three feet tall. How much taller is her mother?

Lesson 49

Subtract on this page

13	14	13	12	11	14	13
9	9	4	7	4	8	9
4	5	9	5	7	6	

14	11	14	13	17	12	13
8	4	9	9	9	7	4

11	13	14	10	14	9	13
7	4	8	3	9	9	7

13	11	13	11	10	13	8
6	5	9	4	4	6	2

13	12	9	14	13	14	11
4	7	9	9	9	8	4

11	14	13	6	12	12	10
6	9	4	0	7	9	3

Lesson 50 *More subtracting*

17	14	15	15	15	12	17
8	5	9	8	7	5	8
9	9	6	7	8	7	

12	17	15	17	14	15	15
5	9	7	8	5	9	8

13	11	14	12	15	13	12
7	5	5	5	8	9	7

15	11	17	12	15	15	10
8	4	8	5	7	9	4

15	14	11	15	17	14	15
7	5	7	8	9	8	9

12	15	12	14	17	15	13
5	9	7	5	8	7	6

Lesson 51 *Subtractions again*

15	14	16	13	16	13	15
6	6	9	5	7	8	6
9	8	7	8	9	5	

13	16	15	13	17	16	14
5	7	6	8	8	9	6

16	15	13	14	14	14	16
7	6	5	6	8	5	9

14	16	13	16	11	13	15
6	7	8	9	4	5	9

15	6	16	14	15	13	13
6	6	9	6	6	8	5

13	12	14	15	16	13	15
8	5	6	7	7	5	8

Making up stories

The boys and girls in Jean's class made up "number-question" stories to ask one another.

1. Jean said, "I had fifteen crayons and I gave Mary eight crayons. How many had I left?"

2. "Jessie's cat caught 13 mice one week and 5 the next week," said Jim. "How many less did she catch the second week?"

3. Mary said: "I had sixteen stamps and I gave Jean nine. How many had I left?"

4. Jack said: "I had fourteen bus tickets and Jim had six. How many more had I?"

5. "I had fifteen postcards," said Jim, "and Jack had only six. How many more did I have?"

6. "We have nine pictures downstairs in our house and nine pictures upstairs. How many is that altogether?" said Jean.

Make up some "number-question" stories and see if your friends can tell the answers.

Lesson 52 *Something to do*

Copy these subtractions and find the answers:

10	9	8	5	12	7	11
7	6	3	2	3	3	3
3						

Now, add your answer to the number above it. If your new answer is the same as the number in the top row, your subtraction is right.

Look at the first example:

7 from 10 is 3. 3 added to 7 is 10.

Copy these subtractions and find their answers. Then make sure that each answer is right.

11	6	12	8	9	10	17
6	0	9	2	9	3	9

13	14	13	12	11	14	11
9	9	4	7	4	8	7

13	10	11	13	17	14	15
7	4	5	6	8	5	9

15 − 7 =
14 − 9 = 5
13 − 5 = 8
16 − 7 = 9
17 − 8 = 9
13 − 9 =
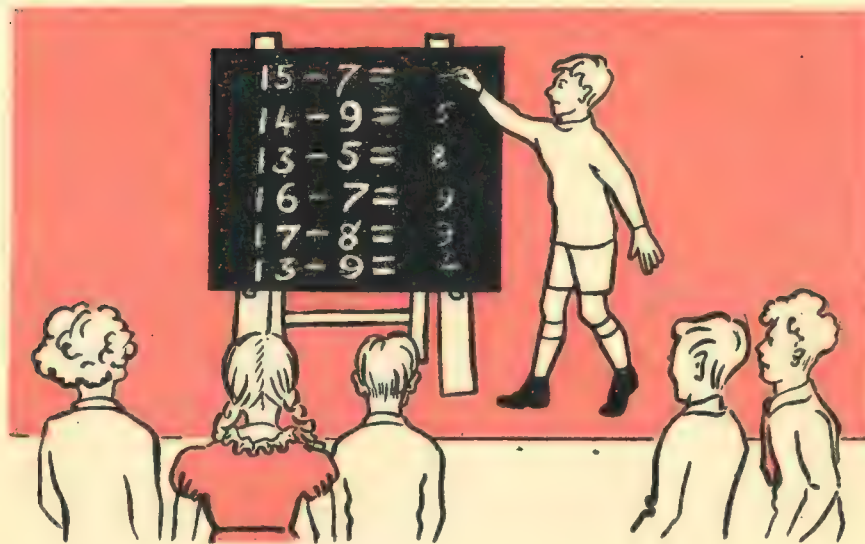
Jim's class is ready to play at ladders.

Here is a subtraction ladder his teacher wrote on the blackboard.

Jim will write the answer to each line beginning at the bottom. If he can get to the top without a mistake he will win a mark for his team.

The class is watching and will call out " Stop! " if he makes a mistake.

Perhaps you and your friends would like to play at this game. You can use any of the subtractions on the next three pages.

Subtract :

12	11	11	8	7	15	8
9	5	2	2	3	8	3

5	13	6	11	10	11	14
2	6	0	7	4	9	7

10	16	9	11	11	11	12
3	8	6	6	8	4	7

14	15	15	17	12	12	14
8	9	6	9	3	5	6

12	14	11	16	13	13	18
6	5	3	9	8	4	9

On the next three pages is a test for you to do. Work it right through to the end.

Subtract:

3	8	5	1	0	5	7
2	1	1	1	0	4	7

5	4	9	6	9	3	4
3	2	9	6	1	3	4

9	6	8	3	6	4	10
8	5	4	1	1	1	2

8	9	8	5	6	6	8
6	0	8	5	3	4	7

6	10	6	10	4	5	7
2	7	0	4	3	2	5

(Go on to the next page.)

92

Subtract:

9	10	12	7	8	7	2
5	1	6	3	2	1	1

2	7	11	7	9	9	5
2	6	2	2	3	6	0

10	7	11	18	14	13	15
6	4	8	9	8	7	9

3	10	10	11	16	15	16
0	5	8	5	8	6	7

17	4	12	12	8	11	12
9	0	9	4	5	6	3

(Go on to the next page.)

93

Subtract :

13	14	9	7	14	15	11
5	5	4	0	7	8	4
14	13	16	9	8	10	13
6	9	9	7	3	9	6
12	11	15	13	2	1	10
7	3	7	4	0	0	3
11	12	13	17	14	8	12
7	5	8	8	9	0	8
9	11					
2	9					

(Learn over again any subtraction in which you have made a mistake.)

Some pages to race on

On this page you are to subtract.

How many can you do in three minutes?

3	3	9	16	4	15	6
3	2	1	8	3	6	1
15	6	8	4	11	7	12
9	6	1	4	6	1	3
2	17	4	1	9	11	3
1	9	2	1	8	4	1
14	5	14	7	5	6	12
6	2	5	7	4	5	7
2	11	6	13	0	5	8
2	3	3	4	0	3	4

(Go on to the next page.)

Subtract:

12	7	13	4	16	5	9
5	5	8	1	9	1	9

5	14	6	13	8	14	9
5	8	4	7	7	9	5

10	10	11	8	16	9	12
8	7	5	8	7	4	9

7	12	12	8	10	13	9
6	4	6	5	4	5	7

7	10	14	7	15	8	13
0	2	7	2	8	2	9

Subtract:

2	8	6	10	9	13	9
0	3	2	9	0	6	6

15	8	1	10	10	6	11
7	0	0	1	3	0	7

5	17	10	12	11	9	7
0	8	6	8	2	2	3

11	3	4	10	7	8	11
9	0	0	5	4	6	8

9	18
3	9

Show your paper to your teacher and ask if you may go on to the next chapter.

Chapter V — Simple addition

Jessie had a Christmas tree at her Christmas party. She and her mother made flowers and other things to put on it.

They had to do a lot of adding and subtracting before everything was ready. This chapter will help you to add as well as they did.

Have you ever had a Christmas tree at your Christmas party?

Lesson 54 — *A missing word game*

You remember that the name for two tens and one unit is *twenty-one* : 21. The name for three tens and one unit is *thirty-one* : 31.

See if you can write the missing name and number in each of these lines :

1. 3 tens and 2 units make   .
2. 4 tens and 3 units make   .
3. 6 tens and 4 units make   .
4. Eight tens and five units make   .
5. Seven tens and seven units make   .
6. Nine tens and six units make   .
7. What are the names for   58,   29,   76,   43 ?
8. Write the numbers for thirty-five, eighty-four, ninety-seven, sixty-two.
9. 3 tens and 7 units make   .
10. 4 tens and 9 units make   .
11. 5 tens and 8 units make   .
12. 6 tens and 6 units make   .
13. 5 tens and 3 units make   .
14. Two tens and two units make   .

Lesson 55

When we write numbers one below the other we are always very careful to put units below units and tens below tens, so that we may remember which is which. If we have to write the numbers 14, 7, 23, 35, one below the other, we do it like this :

$$\begin{array}{r} 14 \\ 7 \\ 23 \\ \underline{35} \end{array}$$

Write the numbers from 1 to 100 one below the other, beginning like this :

1	11	21
2	12	22
3	13	
4	14	
5	15	
6	16	
7	17	
8	18	
9	19	
10	20	

Put ten in each row.

Be sure to keep the lines very straight, and put the units below the units and the tens below the tens.

Show your paper to your teacher.

Lesson 56

This is a new kind of adding.

12		Begin at the right-hand side.
1	*Units*	Think 2 + 1 = 3. Write 3.
13	*Tens*	Think 1 + 0 = 1. Write 1.

12	13	10	6	16	28
4	0	2	13	2	1
16	13	12			

11	2	10	20	15	10
8	17	1	7	1	9

17	11	20	5	11	14
0	1	3	13	2	2

5	21	8	12	6	3
12	0	10	7	13	15

12	13	10	2	19	20
3	4	6	16	0	4

Lesson 57   *The same kind of adding*

Try to get each sum right.

22	30	40	1	62	3
6	9	6	34	3	54
28	39	46			

5	86	54	6	97	20
71	2	5	43	2	1

44	65	71	82	50	3
2	3	2	4	2	66

38	70	5	4	43	81
1	5	22	23	3	5

2	1	93	8	32	7
57	70	1	40	5	61

63	4	56	74	91	93
5	81	0	4	1	3

Playing at stepping stones

Have you ever played at jumping across a stream from one stone to another without wetting your feet?

You can play the same sort of game in the classroom. Jack and his friends did it one day.

Jack began at 0 and added on 2 to jump to the next stone, and 2 more to jump to the next one. The class watched and was ready to call "Splash!" every time an answer was wrong. Jack got as far as 18 before he made a mistake.

Try this game and see how many of you can reach 24.

On this page you are to add :

35	71	40	4	63	3
4	6	7	43	2	30

50	86	41	62	5	34
9	1	2	7	70	2

2	31	57	76	5	5
80	8	0	2	81	73

4	67	58	90	41	6
80	2	1	3	7	93

72	80	1	44	92	63
1	8	63	5	4	6

5	81	3	2	2	93
90	4	55	62	33	4

Lesson 58   *Money*

d.
$6\frac{1}{2}$
$2\frac{1}{2}$
9

If we have to add sums like this one, we begin at the right-hand side and add the halfpennies first.

$$\tfrac{1}{2}\,\text{d.} \;+\; \tfrac{1}{2}\,\text{d.} \;=\; 1\,\text{d.}$$

Remember to add this to the pennies, and do not write anything under the halfpennies.

$$1 \;+\; 6 \;=\; 7, \quad \text{and} \quad 7 \;+\; 2 \;=\; 9.$$

So the answer is 9 d. We write it under the pennies.

Find the answers to these additions :

d.	d.	d.	d.	d.
$7\frac{1}{2}$	$4\frac{1}{2}$	$7\frac{1}{2}$	$2\frac{1}{2}$	2
$3\frac{1}{2}$	$5\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$9\frac{1}{2}$

d.	d.	d.	d.	d.
$3\frac{1}{2}$	$3\frac{1}{2}$	$9\frac{1}{2}$	$1\frac{1}{2}$	5
$3\frac{1}{2}$	$7\frac{1}{2}$	2	$1\frac{1}{2}$	$6\frac{1}{2}$

d.	d.	d.	d.	d.
$2\frac{1}{2}$	$4\frac{1}{2}$	$3\frac{1}{2}$	$2\frac{1}{2}$	$1\frac{1}{2}$
$3\frac{1}{2}$	$3\frac{1}{2}$	$1\frac{1}{2}$	8	$3\frac{1}{2}$

Lesson 59 *Shopping stories*

1. How much money does Tom need if he buys a $\frac{1}{2}$ d. pencil and a $1\frac{1}{2}$ d. apple?
2. What is the sum of $5\frac{1}{2}$ d. and $4\frac{1}{2}$ d.?
3. Jack spent $1\frac{1}{2}$ d. on some balloons and $2\frac{1}{2}$ d. on marbles. How much did he have to pay altogether?

4. Mother bought a cabbage for $3\frac{1}{2}$ d. and half a stone of potatoes at $5\frac{1}{2}$ d.

   How much did she spend?
5. I was sent to buy half a pint of milk at $1\frac{1}{2}$ d. and $3\frac{1}{2}$ d. worth of scones. What did I pay?

Turn back to page 69 and see how many of the additions you can now do in three minutes.

Lesson 60 *Addition again*

23		Begin at the right-hand side.
9	*Units*	Think $3 + 9 = 12.$
32		Write 2. Remember 1 ten.
	Tens	Think $1 + 2 = 3.$
		Write 3.

16	6	18	5	16	6
8	19	3	18	9	18
24	25				

9	8	26	15	8	18
17	19	9	9	17	6

5	19	26	29	15	26
17	6	8	5	8	9

17	9	17	8	16	28
9	14	8	15	8	7

4	17	24	5	25	7
19	5	7	18	7	19

A page to climb on

Try to get more additions right than yesterday.

19	8	17	15	26	26
6	17	8	7	9	8

9	5	7	28	8	13
17	18	19	5	18	8

29	7	29	27	13	26
2	17	9	3	9	5

6	9	23	19	7	7
16	13	7	8	14	16

28	4	15	19	6	29
3	16	6	3	17	4

12	9	14	7	24	18
9	15	9	15	7	6

For the Christmas party

1. Eleven boys and eight girls were to be at Jessie's party. How many toys were needed to give them one each?

2. Jessie made 17 paper dolls to hang on the Christmas tree. Jill, the kitten, tore up 8 of them. How many were left?

3. Jessie made 8 more dolls so that again she had 17. Then her mother made another 5. How many was that in all?

4. Jessie's mother bought 9 yards of paper. Then she bought 16 yards more. How many yards had she altogether?

5. Her father gave her 18 candles for the tree and Jessie bought 7 more. How many was that?

6. Her mother gave her a great many cakes. There were 28 on one table and 9 on another. What was the total number?

Lesson 61 — *More additions*

6 5 —— 11	26 5 —— 31	6 15 —— 21	76 5 ——	56 5 ——	6 45 ——
9 3 ——	9 33 ——	19 3 ——	9 23 ——	79 3 ——	49 3 ——
3 7 ——	3 57 ——	63 7 ——	33 7 ——	3 47 ——	87 3 ——
4 9 ——	24 9 ——	44 9 ——	4 39 ——	84 9 ——	69 4 ——
9 5 ——	9 75 ——	89 5 ——	59 5 ——	5 19 ——	9 35 ——
8 6 ——	8 56 ——	68 6 ——	76 8 ——	88 6 ——	8 66 ——

A page to climb on

On this page you are to add :

9 4 ——	39 4 ——	9 44 ——	69 4 ——	84 9 ——	4 79 ——
7 5 ——	47 5 ——	7 55 ——	37 5 ——	5 77 ——	85 7 ——
4 7 ——	44 7 ——	4 37 ——	4 57 ——	87 4 ——	7 64 ——
6 9 ——	6 69 ——	56 9 ——	6 49 ——	39 6 ——	9 76 ——
6 8 ——	76 8 ——	66 8 ——	6 58 ——	8 86 ——	38 6 ——
8 5 ——	8 85 ——	8 75 ——	48 5 ——	65 8 ——	5 58 ——

Lesson 62 *Something to do*

Count out 100 sticks and put them in rows with ten in each row. How many rows have you?

Yes, there are ten tens in one hundred.

Now write the numbers from 1 to 100 in rows like this, with ten in each row :

    1   2   3   4   5   6   7   8   9   10

  11 12 13 14 15 16 17 18 19 20

  21 22 23 ... right up to 100.

Your last row should look like this :

  91 92 93 94 95 96 97 98 99 100,

and you should have ten rows.

Count and find out if you have ten rows.

Now try to answer these questions :

    1. How many tens are there in 30 ?

    2. How many tens are there in 40 ?

    3. How many tens are in 20 ?

    4. How many tens are in 50 ?

    5. Six tens make   .

    6. Seven tens make   .

    7. Eighty is made up of   tens.

    8. 90 is made up of   tens.

Lesson 63 *Addition*

69	37	9	73	7	88
7	3	58	8	34	6
76	40	67			

5	5	41	67	74	8
48	56	9	6	6	49

56	88	9	7	44	33
7	4	64	75	7	9

4	89	45	62	74	56
58	1	9	8	9	9

9	58	66	9	86	8
76	7	4	85	8	65

75	47	5	38	7	69
7	9	88	2	48	3

A page to climb on

On this page you are to add :

23	9	76	89	5	59
7	13	9	7	48	6
68	47	39	8	8	77
8	9	1	49	67	8
9	54	48	6	85	78
52	8	5	64	9	7
87	46	8	55	7	65
7	8	64	5	78	7
2	88	6	9	79	3
69	2	49	87	6	58
56	61	76	2	43	8
6	9	8	58	9	79

Lesson 64   *Can you remember?*

1. What is the name for one ten and four units?
2. Write the numbers for fifteen, nineteen, twelve.
3. Write the names for 16, 13, 11.
4. What is the name for two tens and seven units?
5. What is the name for six tens and three units?
6. How many tens are there in eighty?
7. Write the numbers for twenty-six, sixteen, seventy-three, and thirty-seven.
8. Write these numbers, one below the other with units below units and tens below tens :

    34,   21,   40, 8,   12.

9. How many tens are there in 60 ?
10. Write the names for 73, 37, 17.
11. How many tens are there in 90 ?
12. How many tens are there in 70 ?
13. Write these numbers one below the other :

    58,   62, 7,   19,   3.

Show your paper to your teacher.

Turn back to pages 69 and 70 and see how many of the additions you can now do in three minutes.

12	19	3	13	39	29
7	5	59	4	4	6
19	24	62			

10	22	45	8	60	7
7	3	1	19	5	72

6	10	75	6	86	17
59	4	9	17	2	5

15	6	20	70	9	5
3	68	9	1	26	16

29	31	8	58	7	89
7	2	25	7	10	8

15	90	7	14	27	64
8	3	28	9	4	6

More about the party

1. Jessie's mother let her fill the sugar bowls. She put in 48 bits of sugar, and then 5 bits more. How many was that in all?

2. The apples came in two bags. In the first bag there were 5 apples and in the second bag there were 19 apples. What was the total number of apples?

3. The oranges came in a basket and a bag. In the basket there were 22 oranges and in the bag there were 9 oranges. How many oranges were there altogether?

4. Jack got a box of stamps. Tom counted 6 and then Jack counted 44 more. How many was that altogether?

5. Mary got a story book. The next day she read 19 pages and then she read 5 pages to finish the story. How many pages were there in the story?

Add:

67	24	3	55	43	1
3	2	89	2	8	79
1	54	76	6	98	32
77	8	2	79	1	8
44	58	8	2	9	77
3	2	64	57	46	9
39	3	87	56	8	45
1	82	8	4	62	8
9	61	72	4	58	35
87	4	8	45	9	9
84	77	2	8	66	56
8	2	94	67	4	8

Jessie's party again
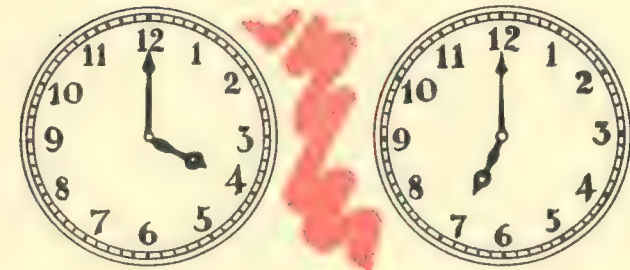
1. Jessie's party began at four o'clock and ended at seven o'clock. How long did it last?
2. Ten girls were asked to the party. Only eight could come. Tom wondered how many did not come. What was the answer?
3. Tom counted the chairs. There were seventeen small ones and two large ones. How many were there altogether?
4. Eleven boys came to the party. Three had to leave early. How many were left?
5. Sixteen boys and girls played at musical chairs. When seven were out how many were left?
6. Tom counted the plates at supper. There were nineteen little plates and nine big ones. How many was that in all?

On the next page is a test for you.

Pupils' own test 5

Add :

5	77	11	8	63	8
11	2	9	9	7	15
10	4	14	58	5	43
9	41	8	9	48	9
13	61	8	8	85	34
5	7	12	69	7	5
2	3	6	49	9	7
23	54	15	8	56	78
2	5	27	8	6	80
16	82	9	79	55	4
29	93	6	89	69	6
0	6	14	8	3	62

| Lesson 56 | Lesson 57 | Lesson 60 | Lesson 61 | Lesson 63 | Lesson 65 |

A page to race on

On this page you are to add.

How many sums can you do in three minutes?

7	34	5	5	8	8
10	4	15	9	85	11
15	75	8	5	54	57
3	1	14	69	7	3
1	7	19	79	3	43
22	50	1	5	48	8
26	43	17	55	8	2
3	2	6	9	86	64
13	86	29	5	66	5
4	3	3	49	9	39
10	7	4	5	85	5
6	91	16	79	6	87

Ask if you may go on to the next chapter.

Chapter VI Money

Jack wanted to buy 3 oranges.

They cost $4\frac{1}{2}$d. and he had only 3 d.

How much more did he need?

Perhaps your teacher will let you play at keeping a fruit shop.

If you do so this chapter tells you some of the things you need to know about money.

Find out the names of a great many fruits, and make as many of them as you can.

Lesson 67 *A mixture*

Here is a page on which you are sometimes to add and sometimes to subtract. Remember that $3 + 2 = 5$, but $3 - 2 = 1$. See if you can get them all right.

$15 - 9 =$.	$2 + 3 =$.	$15 - 7 =$.
$7 + 3 =$.	$12 - 8 =$.	$9 + 6 =$.
$17 - 8 =$.	$3 + 9 =$.	$14 - 6 =$.
$7 + 8 =$.	$15 - 8 =$.	$5 + 9 =$.
$6 + 3 =$.	$3 + 4 =$.	$16 - 7 =$.
$14 - 5 =$.	$8 + 9 =$.	$3 + 8 =$.
$7 - 4 =$.	$15 - 6 =$.	$8 + 7 =$.
$3 + 5 =$.	$16 - 9 =$.	$5 + 7 =$.
$12 - 5 =$.	$13 - 5 =$.	$13 - 8 =$.
$0 - 0 =$.	$2 + 1 =$.	$0 + 0 =$.
$6 + 1 =$.	$7 - 7 =$.	$1 + 8 =$.
$4 + 0 =$.	$1 + 3 =$.	$3 - 3 =$.
$6 - 6 =$.	$2 + 0 =$.	$10 - 1 =$.
$1 + 7 =$.	$7 - 6 =$.	$1 + 1 =$.

Lesson 68

Here are more sums like those on the last page.

1. Find the sum of 9 and 4.
2. Take 9 from 13.
3. Find the total when we add 7 and 5.

4. How many are 8 and 6 altogether?
5. Find the difference between 9 and 14.
6. What is the sum of 4 and 7?

7. By how much is 4 less than 13?
8. What is left if I take 7 from 12?
9. What is the total when we add 9 and 5?

10. By how much is 11 greater than 4?
11. Add together 4 and 9.
12. From 14 take 8.

13. How many more is 16 than 9?
14. How many less is 6 than 15?

Turn back to pages 95 and 96 and see how many of the subtractions you can now get right in three minutes.

Lesson 69 *Something to do*

From the box of money take out one three-penny bit, one sixpence and one shilling.

Do you know how many pennies you could get for a " threepenny bit "?

How many pennies could you get for sixpence?

Now count out twelve pennies and put them beside one shilling. Write in your book :

" Twelve pennies are equal to one shilling."

" Six pennies make one sixpence."

" One sixpence is half of one shilling."

" Three pennies are worth the same as one threepenny bit."

The words " are equal to ", " make ", and " are worth the same as " all mean the same thing.

They mean that we could get :

  12 pennies for one shilling.

  6 pennies for one sixpence.

  3 pennies for one threepenny bit.

Lesson 70 *Money*

Count out the coins into heaps and find the answers to these sums :

1. How many pennies make one shilling?
2. How many pennies are equal to one sixpence?
3. How many pennies could you get for one threepenny bit?

4. One shilling is equal to   d.
5. One threepenny bit is equal to   d.
6. Two sixpences are worth how many shillings?

7. One shilling is equal to   sixpences.
8. How many threepenny bits make one shilling?
9. One shilling is worth   threepenny bits.

10. One sixpence is worth   threepenny bits.
11. Two threepenny bits make   pennies.
12. How many halfpennies make a threepenny bit?

13. How many pennies are in half of one shilling?
14. How many pennies are in half of one sixpence?

On the next page is a test for you to try.

126

1. 3 d. + 5 d. =   .
2. From 10 pennies take away 6 d.
3. 9 halfpennies make   d.
4. 4 d. =   halfpennies.
5. Add 7 d. and $2\frac{1}{2}$ d.
6. Find the difference between $9\frac{1}{2}$ d. and 3 d.
7. Find the sum of $8\frac{1}{2}$ d. and $2\frac{1}{2}$ d.
8. One shilling is equal to   d.
9. One threepenny bit =   d.
10. How many sixpences make one shilling?

An exercise to race in

1. 4 d. + 4 d. =   .
2. From 11 d. take away 3 d.
3. 7 halfpennies make   d.
4. 5 d. =   halfpennies.
5. Add $6\frac{1}{2}$ d. and 4 d.
6. Find the difference between $8\frac{1}{2}$ d. and 6 d.
7. Find the sum of $3\frac{1}{2}$ d. and $7\frac{1}{2}$ d.
8. One shilling is equal to   threepenny bits.

Ask if you may go on to the next part of the book.

127
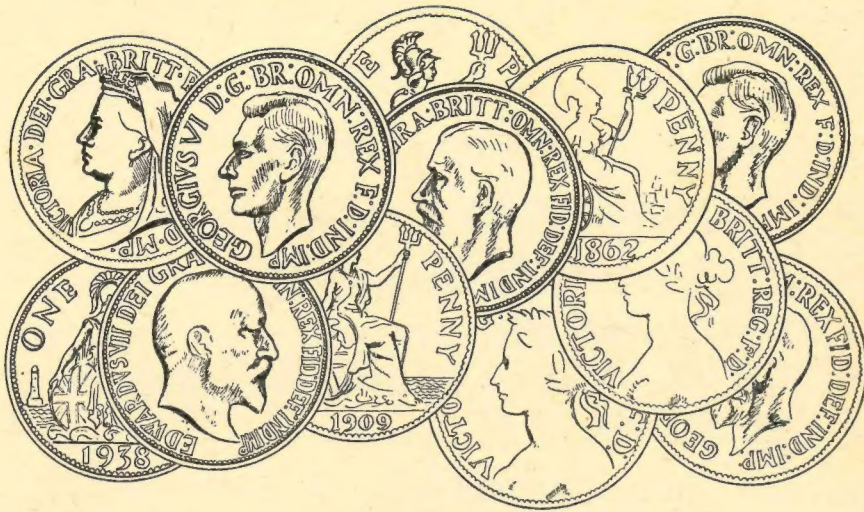
Twelve pennies

One shilling

Two sixpences

Four threepenny bits

128